909 F St., NE
Washington, DC 20002
202-544-8589 (TTY)

November 27, 1996

Mr. William F. Caton
Acting Secretary
Federal Communications Commission
1919 M Street, NW
Washington, DC 20554

Dear Mr. Caton:

I am submitting these comments to the Federal Communications Commission in response to its Notice of Inquiry on Access to Telecommunications Services, Telecommunications Equipment, and Customer Premises Equipment by Persons with Disabilities, WT Docket No. 96-198.

I would like to thank the FCC for its commitment to accessibility for all Americans.

Respectfully Submitted,

David J. Nelson
Advocate

Enclosure: Diskette with WordPerfect 5.1 and ASCII formats

Before the
Federal Communications Commission
Washington, DC

In the Matter of	)	
Implementation of Section 255 of the	)	
Telecommunications Act of 1996	)	
	)	WT Docket No. 96-198
Access to Telecommunications Services,	)	
Telecommunications Equipment, and	)	
Customer Premises Equipment	)	
By Persons with Disabilities	)	

Reply Comments

David J. Nelson
909 F St., NE
Washington, DC 20002
202-544-8589 (TTY)

November 27, 1996

Before the
Federal Communications Commission
Washington, DC

In the Matter of	)	
Implementation of Section 255 of the	)	
Telecommunications Act of 1996	)	
	)	WT Docket No. 96-198
Access to Telecommunications Services,	)	
Telecommunications Equipment, and	)	
Customer Premises Equipment	)	
By Persons with Disabilities	)	

Reply Comments to the Notice of Inquiry

I am an advocate and a deaf person who has been involved with Telecommunication issues for past 10 years, mostly on the local level. I serve on the boards of several local organizations such as DC Association of the Deaf Citizens (DCADC) and DeafPride. I am also a DCADC's representative to the DC Telecommunication Relay Service Advisory Board and a member of several national organizations serving the deaf. After the passage of the Americans with Disabilities Act (ADA), I was one of the leaders who worked with the DC Public Commission Service to create the DC Relay Services.

For years, I have sought ways to make telecommunications easier for all Americans, and often I faced problems or met resistance. With the passage of the Telecommunications Act of 1996, accessibility for persons with disabilities is one step closer. On behalf of the deaf citizens in the United States and internationally, we thank the FCC for its commitment to telecommunications access for ALL people and for giving me the opportunity to speak on this issue.

I am submitting comments to the FCC's NOI parties that have replied. I support the positions and would like to explore the problems that the Consortium for Citizens With Disabilities and the National Association of the Deaf mentioned in their NOI filings. However, I felt that it is critical that I provide you the products and services that I and many other people (deaf and non-deaf) use on daily basis. The listing will give you some examples of the types of services and products that will need to be addressed by the FCC when drawing up the regulations and guidelines.

Below, organized by products and services, are specific problems and issues with some recommendations:

+ **TTY Interception Message**

The common carriers that provide local services should send TTY/ASCII messages to users to notify them that the number is no longer in service or the phone number has been changed. I plan to change my phone number, however, I refuse to change my number right now because I get unexpected calls from friends. I feel they should receive a TTY interception message. I am aware that PacTel already has this service and I believe Ameritech has it too. This should be top priority for the FCC to issue an order to the Common carriers to install this TTY Interception Message as soon as possible. I and many friends subscribe to a national TTY phone directory as well as a local TTY directory. They come out in a different period and I would have to wait for the next

published directories before my friends would get the new number.

+ TTY Voice Mail

The common carriers should have a TTY Voice Mail similar to Voice Mail. Again, I am aware that PacTel has this service. When I spoke to several local bell people about this, they told me to use the Voice Mail without realizing how very difficult it is to use. A friend of mine, who has voice mail, said it is very frustrating for him and sometimes he has to get his non-deaf roommate to help him to know when to press the various function keys.

There should be TTY Voice Mail in the PBX as well. In my company's PBX, they have voice mail but for the same reason I mentioned above, I can't use it.

Oftentimes, my co-workers, friends, family, and others complain that my line is busy because I'm on the phone or I am using my home line into the On-Line services. For non-TTY users, the voice mail will take incoming messages.

The TTY Voice Mail should have the capability to handle voice, TTY, Baudot, and ASCII if there are mixed type of calls. For example, in a household, there may be a deaf and non-deaf person living there, and they share the phone line. If the TTY Voice Mail comes on, a brief voice recording would say if this is for so-so, press "1" now (then it will go to a voice recording). Otherwise, the TTY Voice Mail will go into the TTY/ASCII message recording. This would be ideal for my household. I get many

voice calls and could leave a voice message explaining to the caller (voice callers) that they can reach me by calling the Relay Service.

+ **Caller Waiting**

There should be a Caller Waiting Indicator to let me know of any incoming calls while I'm on the TTY. A friend of mine have what it is called MessageAlert, which a small white box on his Personal Computer letting him know that there is a voice message waiting for him. After he hangs up from using the Computer, a small red light flashes in about 10 to 20 seconds indicating he has a voice mail. He told me that it uses the "stutter tone" that the phone company puts on the line to act as a trigger to start the red light. The red light will stop flashing when he clears the voice messages. A similar product should be provided (either on the phone, TTY, keyboard, or a separate box) to warn me of an incoming call, therefore allowing me to put my TTY calls on hold to talk with the incoming caller. A design development is needed to allow the function to be performed from the keyboard, as keyboards don't have a retriever button to put the call on hold. Also, we need to make sure the "stutter tone" do not interfere with the TTY/ASCII when online.

+ **Caller ID**

Earlier this year, after getting so fed up with many voice callers, I decided to get the Caller ID to trace back calls and

find out if they were calling me. I have to say about 75% of my voice calls are coming from "Out of Area" and I have no way of knowing how or why people keep calling. I traced a call and the caller told me that they got this phone number (my phone number) from their workplace and that the number was for the Personal Computer (PC) to dial in the mainframe. But, I still question where the 75% "out of area" are coming from? I strongly urge the FCC to review the Caller ID capability and resolved this.

A unusual thing about some of the "out of area" is that I do get calls from the Relay Services. I suggested that the Relay Service Center put their outgoing trunk line as "Relay Center" so I can know that the calls were coming from the Relay Services. However, legal issues were raised and it has not been resolved. I don't care if it is coming from one particular kind of Relay Service, all I want is to see "Relay Service" appear on my Caller ID screen so I can assume who the calls are coming from. I strongly urge the FCC to issue an order to all Relay Centers to put "Relay Services" on their outgoing calls (without their phone numbers).

+ **Dial Tone**

The phone network needs to send out a stronger dial tone when it is not being used. Sometimes, when I'm on a TTY call, I get disconnected and I have no way of knowing. Sometimes the phone network will send out a strange signal about three or so minutes later. The common carriers should have a function that

when deaf users subscribe to the line, when the other end is disconnected, a stronger dial tone will be sent.

This will be useful for the hard of hearing to hear the stronger dial tone.

+ **Voice Menu**

Oftentimes, when I call a number through the Relay Service, the Communication Assistant (CA) get a voice menu and the message is too fast for the CA to type all the options for me to select. The Voice Menu system should have an extra feature (i.e. press * twice) for the CAs to repeat the voice menu message to enable them to type the entire message.

+ **TTY Menu**

Any products or services offering a menu through the phone by pressing keys should have alternative format for the TTY users to call, i.e. TTY Menu. A year ago, I saw a TV commercial "Home of the Future" and a guy was in an airplane heading home, he dialed from the phone and pressed some function keys which automatically turned on the lights and air condition at his home. It was all ready when he came home and he didn't have to worry. If this is being offer, the company should be required to provide a TTY Menu where I can call remotely and do whatever functions needed.

+ PBX

In my company's PBX, it is difficult for me to make long distance calls because I'm required to enter an authorization code after entering the number I wish to call. Currently, for the non-deaf, after entering the long distance number, about 5 to 8 seconds later, a recording comes on the line requesting the party to enter the authorization code to complete the dialing. When I started working with my current company about 6 years ago, I had to have a separate line (same number) and take the hook off the phone. After dialing the number, I have to count 5 seconds or so then enter the authorization code. Most of the time, I'm successful but not always. I even tried to use the dial keys (the keyboard) on my TTY and it didn't work. My company later purchased a TTY/ASCII modem for my PC; I had to negotiate with the programmer, who made the TTY Software, to add a function so I can do Suffix dialing (it took me over 2 years to convince him). Recently, I got a new TTY/ASCII modem and the new software doesn't have the suffix features. Currently, I am switching back and fourth with the TTY software, using the older software for long distance only and the current software for local calls.

I have been in two different offices with two different PBX (operated by two different companies). I tried to get them to remove the block authorization codes so I don't need to enter an authorization code. But, the system was not designed that way. The PBX should have a way for certain phone lines to by-pass the block (or authorization codes).

+ **FAX**

It is difficult for me to fax long distance. With older FAX machine, I have to have a separate line (same number) and take the hook off the phone. After dialing the number, I have to count 5 seconds or so then enter the authorization code. Most of the time I'm successful, but not always. With the FAX machine I use now, I can enter the pause key five times (which will pause five seconds) after the long distance number and then enter the authorization code. But, I tried the same FAX machine at another building not long ago and it didn't work because the PBX in that building requires more than 5 pauses.

Another problem I have faced in the past few years is the growing of "FAX by demand". From my observation, my non-deaf co-workers have faced different ways of using FAX-by-demand. Some can be done from the fax machine and some can be done from the regular phone at your desk. There should be ways for the deaf and hard of hearing users to access the FAX-by-demand. Once while working alone on the weekend trying to finish up an important project, I ran into some problems and needed an answer. It turned out that I had to get it from the FAX-by-demand. I called technical support for assistance and they stated they would be happy to fax it and even still I would have to wait 3 hours for the fax.

+ **Operator/411**

The common carriers should have TTY lines for the deaf/hard

of hearing to call in for operator assistance as well as for getting phone numbers (through 411). If the common carriers choose not to have TTY Operator or 411 Services, they should contract to a vendor to do it. Currently, as a TTY user, if I call the AT&T Operator Service for the Deaf (OSD), I will be charged a fee to get a phone number. I can't even call the 411 from the DC Relay Service. In DC (which I'm quoting from the Bell Atlantic (BA) Phone Directory), "Residence customers have a monthly allowance of five Directory Assistance calls per line. Calls over that allowance cost 36 cent each." Also, in the BA's Phone Directory it states "Calls to Bell Atlantic Directory Assistance from Bell Atlantic public (coin) phones are free" -- I do not know if I'm entitled to free phone directory assistance from OSD, but this should be looked at.

+ **V.18 or new version**

A few years ago, an international group (ITU-T) drew up and voted on a new TTY/ASCII standard known as V.18. This version allows United States and most European TTYs to be compatible with each other. Currently, my TTY is not compatible with any of the TTYs in Europe. Also, in the past year or so, a TTY manufacturer or two have come up with their own enhanced Baudot TTY codes but it will work only with the same brand of TTYs, not with other brands (only when using the enhanced Baudot TTY codes otherwise, using the regular TTY codes will work fine). The v.18 will "standardize" the TTY codes internationally, but it will include

the ASCII versions which will enable the non-deaf person, who does not have a TTY, to call deaf people who have the v.18 TTY or modem. For instance, my cousins call me at work via computer regular modem because the TTY/ASCII modem can handle ASCII calls. However, they can't call me at home because I do not have the TTY/ASCII TTY or modem. Therefore, they have to reach me through the Relay Service to let me know that I will need to set up my computer and modem for incoming calls. This step seems to "discourage" my cousins from calling me at home; they decide to wait and call me at work.

The problem with the v.18, I understand, has not been tested. No modem manufacturers are willing to spend the money on Research and Development. I strongly encourage FCC to call a special summit meeting with the TTY manufacturers, modem manufacturers, deaf and hard of hearing consumers, researchers, etc. to discuss this and develop strategies for Research and Development with some funding from FCC to develop the v.18.

One note, we need to keep in mind is that we shouldn't "lock in" on the v.18 standard. The FCC should allow any new TTY/ASCII/future-code version that is approved by an international group in the future to replace or upgrade the v.18.

This will "phase" out the slow code, Baudot, and "phase in" the faster, ASCII in all TTYs so the TTY users can communicate faster.

+ **Modem**

I look forward to the day, when I can walk into any computer store and buy a modem off the shelf that includes the TTY Baudot (or v.18). That way, I can get a modem at market price just like everybody else. One may argue, why would I buy a TTY/ASCII modem that is current on the market. Well, it costs roughly $300.00 or higher for the TTY/ASCII modem (one TTY/ASCII internal modem you can buy for $299.00 but it only goes up 14.4kbps as opposed to buying a regular 14.4kbps modem for less than $75.00). Besides, this is the only TTY/ASCII modem I know that is on the market with the high speed. I would rather spend the money buying the latest and fastest modem (32.2kbps) off the shelf at the store to use for computer calling to on-line service or video conference.

Also, there are no TTY/ASCII modems I can buy today for the laptop's PCMCIA slot. Recently, I was on a 10 day trip and I had my laptop. I was visiting a non-deaf friend's house, and he didn't have a TTY, therefore I wasn't able to use the laptop to make TTY calls.

A few months ago, I saw an advertisement of an external modem that allows the user to leave the PC off. With the external modem on, the modem has the capability of handling many "mailboxes" for voice callers to leave message as well as take incoming faxes to be stored. This is what I would love to buy for my home. This will allow me to leave my PC off when I'm away from home without worrying about the PC using too much electricity. I can either call in remote to check for my TTY

messages or fax as well as turn on my PC, to retrieve my TTY messages and faxes.

+ **Airfone and Railfone**

I'm concerned about using the phone from the airplane as well as from the trains. Currently, Amtrak's Railfone is analog. I was advised that analog is good for many current TTYs that many deaf/hard of hearing people are using. A friend of mine said he had used the TTY from the airplane without any problems. However, on my recent trip, I noticed an airfone on the back of the seats. It was digital and I believe many TTYs will not work well with them. I don't know what the solution is but the airfone and railfone should still handle analog for TTYs as well as for future TTY's that comes off the factory line and should have the capability of handling both analog and digital.

+ **Radio**

I understand that a live captioning radio news was being developed. I believe that the Radio falls under the Telecommunication Acts of 1996 and that FCC should set rules requiring that Radio Stations provide captioning news and encourage some type of devices for the deaf/hard of hearing to receive the news or other information. Also, this should apply to the Walkman.

+ **Signal and Vibrator System**

In my house, I have a wireless signal system that consists of transmissions and receivers. The transmission is wired from the doorbell as well as to the phone jack. When the doorbell or phone rings, it sends transmission to my receivers, which my lamps or vibrator are plugged into which will go off. However, there are two problems with it. One is that this transmissions use some type of low-frequency signal and it interferes with another low-frequency signals. A few years ago, I believe someone who lived on my street, had an old PC or some other equipment, causing my signals to flash around my apartment. I am concerned that this low-frequency for the transmission is an unreserved signal and anyone is allowed to use it -- I strongly encourage FCC to take a look at this and reserve the low-frequency that we are currently using (this information was from one of the persons who sold me the wireless signals system).

In my new house, I do not have the alarm system that is hook up to the security company. However, I've been considering doing it soon. I wonder how it would work with my current wireless system. If the alarm goes off, I have no way of knowing. I do not know of any alarm systems that have the transmission capability. I was staying at a friend's house and his signal system is wired to the doorbell, phone, and alarm system. He has a strobe built-in each rooms (his house is new so it was easy for him to do this but at extra cost).

+ **Pager**

All pagers should have the vibrator capability when receiving pages. The pagers should have the capability to receive the low-frequency signals that the phone is ringing or someone is at the doorbell, during times when I am outside my house reading or working in the garden.

+ **Applications**

All communication and other software should have visual signals or warnings. Much communication software does not have a signal to let me know if my line is dialing, or the line is ringing, etc. In my company's email, I have no warning that I received an incoming email. Some type of flashing on my PC screen should be provided.

It is my understanding that the Deaf/Blind prefer to use DOS applications when using wordprocessors or any applications. This gives them an easy way of finding what they are looking for through close vision or braille. I'm concerned that the application developers are now focusing on their future applications in Windows or Win95 versions. It is my understanding that the Window for NT can not run any DOS applications. In future Window's development, they will switching to more 32 bit programming and leave behind 16 bit programming. The future Window's development, or any operation system, should allow us to run the 16 bit applications (I suspect that many of the special programs that the Deaf/Blind are using

are 16 bits).

I have one of the best TTY software, but it is DOS version and I can't even upgrade my Windows 3.11 to Windows for NT because it will not work.

+ **Service**

All common carriers should have a department that handles and focuses on the needs of the disabled. This way, they can advise the common carriers of the latest trends going on for those with disabilities. For example, a few common carriers were forced to create a disability department by their own state's public service commission. After the creation of the department, not only is the relationship between the common carriers and the disability communities greatly improved, but upper management has changed their attitudes with respect to the disability communities. We are "marketable" just like anyone on the earth. Our products not only benefits us, but will benefit everyone.

The common carriers should have their business telephone center (to establish new service, order changes in services, etc), Collection Center (to discuss overdue bills), and Repair Center (to repair phone lines) accessible to the TTY, at the same hours provided to the non-TTY users. This should include 611. Let me give you an example of current Bell Atlantic's TTY service (they handled all the services I mentioned above). They are open less hours than the voice phone numbers or non-TTY numbers. The TTY service is open only 9:00 am to 4:30 pm weekday, while the

voice numbers are open a variety of hours such as 8:00 am to 6 pm or 24 hours. I think it violates my right as a TTY user under the American with Disabilities Acts. For example, I can't dial the Residence Service (the number is 611) from the Relay Service because they are not capable of handling the 3 digit number and I have to provide a full local 7 digit number. I selected Bell Atlantic's Business Service number to ask for assistance rather than use the Residence Service (this happened one night after the TTY Service was closed).

The TTY Service should be properly trained in handling TTY calls as well as reduce busy signals. I've been unsatisfied with Bell Atlantic's TTY Service staff because they can't type well, type too slow, or they don't understand us (perhaps because of our deaf culture and language). A few times, in the middle of my busy period at work, I couldn't call the TTY Service because of busy signals. I complained to whoever answered that I had been trying to call almost all day and that they should add extra lines, extra staff. They acted like it wasn't a big deal. One time, for a few days, the TTY Service line was ringing constantly without anyone answering the line. Finally, I got someone and I asked about it. They said they don't know why it wasn't answered.

+ TTY Pay Phone

After the passage of the ADA, we thought we would be seeing more TTY Pay Phone booth (according to ADA, for every bank of

four (4), one TTY pay phone should be installed). However, this is not the case. I assume there are reasons for the "delay" in installing the TTY pay phone. However, I have been hearing a lot about "who is responsible" for paying for it. Many owners of facilities feel that the local bell companies should be providing the service. However, the local bell companies feel they are not responsible because many local independent pay phone vendors are not going to be installing the TTY Pay Phone. For example, last year or so, the Washington Metro (the subway system) installed payphones on the platform (about 2 to 4 single payphone per platform). Not one of them is a TTY Pay Phone! I have to walk to the near entrance of the Metro to make TTY calls. I should be able to make a call on the platform just like other non-deaf person. I strongly urge FCC study this and find ways to increase the number of TTY Pay Phone booths.

+ Long Distance Rates for TTY users

TTY long distance calls including business and Relay Service should be reduced at least 50 percent because the transmission of the voice calls are at least 4 times the TTY callers.

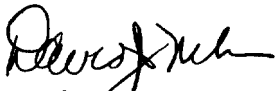
CONCLUSION

I urge the FCC to write rules for all the listings I've mentioned. Not only will this benefit all the people with disabilities internationally, it will benefit to all people who are not disabled as well.

Access to technology is essential for ALL deaf and hard of hearing people, including children, to achieve their dream of equally participating in society. I do look forward to the day I can sit back and celebrate the achievement that we all, including you, made this happen.

Again, on the behalf of the Deaf Citizens of the World, we thank you from bottom of our hearts.

Respectfully Submitted,



David J. Nelson
Advocate

Attachment A

DOCUMENT OFF-LINE

This page has been substituted for one of the following:

o An oversize page or document (such as a map) which was too large to be scanned into the RIPS system.

o Microfilm, microform, certain photographs or videotape.

o Other materials which, for one reason or another, could not be scanned into the RIPS system.

DISK

The actual document, page(s) or materials may be reviewed by contacting an Information Technician. Please note the applicable docket or rulemaking number, document type and any other relevant information about the document in order to ensure speedy retrieval by the Information Technician.